

Simplify the following. Note all restrictions.

1. $\frac{2}{b+3} + \frac{3}{b+5}$ LCD: (b+3)(b+5)

$$\frac{2(b+5)}{(b+3)(b+5)} + \frac{3(b+3)}{(b+5)(b+3)} = \frac{5b+19}{(b+3)(b+5)}$$

2. $\frac{x-2}{x+3} - \frac{x+2}{x-1}$

3. $\frac{3x}{x^2+7x+12} + \frac{x}{x^2+6x+8}$

$(x+3)(x+4)(x+4)(x+2)$ $(x+3)(x+2)(x-2)(x+2)$

LCD: (x+4)(x+3)(x+2) LCD: (x-2)(x+3)(x+2)

4. $\frac{2x}{x^2+x-6} + \frac{3x}{x^2-4}$

5. $\frac{x-1}{2x^2-5x-3} + \frac{x}{x^2-4x+3} - \frac{2}{2x^2-x-1}$

6. $\frac{2x}{3x^2-x-2} + \frac{x+1}{6x^2-11x-10} - \frac{3}{3x+2}$

7. $\frac{x+1}{x^2-4x+3} - \frac{x-3}{x^2+4x-5} - \frac{x+5}{x-3}$

8. $\frac{4x}{x^2-4} + \frac{x+1}{x^2-x-6} - \frac{5}{x^2-5x+6}$

9. $\frac{2}{2x-1} + \frac{3}{2x^2+5x-3}$

